

REMARKS

The Office Action alleges that claims 37-55 lack unit of invention with claims 19, 21-25, 29-31, 33, and 34, citing Hollmann (U.S. Patent No. 4,283,241) and Okada et al. (Published U.S. Patent Application No. 2001/0002608). Additionally, the Office Action rejects claims 30, 31, 33, and 34 under 35 U.S.C. § 112, second paragraph. The Office Action also rejects claims 30 and 33 under 35 U.S.C. § 102(b) as being anticipated by JP 3-114737 (hereafter "JP '737"). Further, the Office Action rejects claims 19, 21-23, 29-31, and 33 under 35 U.S.C. § 103(a) over various combinations of JP '737, Okada, Sasaki et al. (U.S. Patent No. 4,985,100), Miyamoto et al. (U.S. Patent No. 5,399,225), Irie (U.S. Patent No. 4,468,267), and Kondo et al. (U.S. Patent No. 5,413,653). The Office Action also rejects claims 24, 25, and 34 under U.S.C. § 103(a) as being obvious over the foregoing references in combination with Caretta et al. (Published U.S. Patent Application No. 2001/0042586).

By this Reply, Applicant has amended claim 19 to recite "wherein after disposing the belt structure and before winding up said at least one continuous strip element of elastomer material, a step is carried out of moving the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards a delivery member that feeds the strip element forming the tread band around the belt structure with the auxiliary drum positioned away from the vertical plane containing the rotation axis of the primary drum, starting from said coaxial-alignment relationship with the primary drum." Additionally, Applicant has amended claim 30 to recite "wherein the at least one delivery member applies the tread band by laying down at least one continuous strip element of elastomer material in contiguous circumferential coils onto

the belt structure; an actuating assembly set to drive the auxiliary drum in rotation around a geometric axis thereof so that said strip element is circumferentially distributed on the belt structure, and to cause controlled relative displacements between the auxiliary drum and said at least one delivery member for distribution of said strip element so as to form said coils disposed in mutual side by side relationship to define the tread band; wherein said actuating assembly is arranged to cause translation of the auxiliary drum, starting from a position at which the auxiliary drum interacts with the devices for applying the belt layers, away from a vertical plane containing the rotation axis of the primary drum towards said at least one delivery member, which feeds the strip element forming the tread band onto the belt structure with the auxiliary drum disposed away from a vertical plane containing the rotation axis of the primary drum, and to subsequently move the auxiliary drum away from said delivery member to position it again in coaxial-alignment relationship with respect to the primary drum; and wherein the apparatus disposes the carcass structure on the primary drum by assembling component parts of the carcass structure on the primary drum."

Applicant has also amended claims 33 and 34 to depend from independent claim 30, rather than cancelled claim 32. Further, Applicant has added new claim 56, which recites "[t]he method of claim 19, wherein applying the tread band by winding up at least one continuous strip element of elastomer material in contiguous circumferential coils around the belt structure includes varying an overlapping amount of the contiguous coils to modulate the thickness of the tread band." Applicant has also added new claim 57, which recites "[t]he apparatus of claim 30, wherein the at least one delivery member applying the tread band by laying down at least one continuous strip element of

elastomer material in contiguous circumferential coils onto the belt structure includes varying an overlapping amount of the contiguous coils to modulate the thickness of the tread band.”

Additionally, Applicant has cancelled claims 38-41, 44, 45, 47, 50-52, and 53-55. Applicant believes the originally filed application and drawings fully support the amendments to the claims. No new matter has been added. Claims 19, 21-25, 29-31, 33, 34, 56, and 57 are currently pending.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Regarding the rejection of claims 30, 31, 33, and 34 under 35 U.S.C. § 112, second paragraph, Applicant respectfully submits that the amendments to claim 30 should address the concerns expressed in the Office Action. Accordingly, Applicant respectfully requests withdrawal of the rejection of these claims under 35 U.S.C. § 112, second paragraph.

Rejection Under 35 U.S.C. § 102(b)

Regarding the rejection of claims 30 and 33 under 35 U.S.C. § 102(b), Applicant respectfully submits that JP '737 cannot anticipate these claims. In order to anticipate a claim, a reference must teach every limitation of the claim. M.P.E.P. § 2131. In an apparatus according to either of claims 30 and 33 “[a] transfer member moves the belt structure from [an] auxiliary drum to [a] primary drum” and “the apparatus disposes the carcass structure on the primary drum by assembling component parts of the carcass structure on the primary drum” (emphasis added).

Applicant respectfully submits that JP '737 fails to teach or even suggest these features of claims 30 and 33. JP '737 discloses a system with two belt molding drums

4a, 4b, a transporting device 8, and a shaping drum 1. English Abstract. However, JP '737 fails to teach or even suggests that "the apparatus disposes the carcass structure on the primary drum by assembling component parts of the carcass structure on the primary drum" (emphasis added).

Additionally, an apparatus according to either of claims 30 and 33 includes, *inter alia*, "at least one unit for applying the tread band [comprising] at least one delivery member, wherein the at least one delivery member applies the tread band by laying down at least one continuous strip element of elastomer material in contiguous circumferential coils onto the belt structure" (emphasis added). Applicant respectfully submits that JP '737 fails to teach or even suggest these features of claims 30 and 33. JP '737 discloses "cap ply ribbons are wound onto the belts in the form of coil and cap ply is molded by means of a molding machine 6 and further a tread is fed onto the cap ply by means of a feeder 7" (emphasis added). In other words, JP '737 discloses constructing only the cap ply by winding a ribbon, indicating its system constructs the tread band by manufacturing it as a semifinished piece and wrapping it around the cap ply. Thus, JP '737 does not teach or even suggest "[applying] the tread band by laying down at least one continuous strip element of elastomer material in contiguous circumferential coils."

Furthermore, in an apparatus according to either of claims 30 and 33, the "at least one delivery member" "feeds the strip element forming the tread band onto the belt structure with the auxiliary drum disposed away from a vertical plane containing the rotation axis of the primary drum" (emphasis added). Applicant respectfully submits that JP '737 does not teach or suggest these claimed features, either. Rather, the feeder 7

of JP '737 applies the semi-finished tread band onto a cap ply disposed on a belt drum while the belt drum is aligned with a shaping drum. See Abstract and Fig. 1.

For at least the foregoing reasons, JP '737 cannot anticipate claims 30 and 33. Accordingly, Applicant respectfully requests withdrawal of the rejection of these claims under 35 U.S.C. § 102(b).

Rejections of Claims 19, 21-23, 29-31 and 33 Under 35 U.S.C. § 103(a)

Regarding the rejection of claims 19, 21-23, 29-31 and 33 under 35 U.S.C. § 103(a) as being unpatentable over various combinations of references that include Sasaki and JP '737, Applicant respectfully submits that the cited references cannot support a *prima facie* case of obviousness at least because Sasaki and JP '737 teach away from the claimed combinations. A reference that teaches away from a claimed combination generally cannot support a *prima facie* case of obviousness of that claimed combination. McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1354 (Fed. Cir. 2001), citing In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994). A reference teaches away from a claimed invention if reading the reference would discourage a person of ordinary skill in the art from implementing the claimed invention. Tec Air, Inc. v. Denso Mfg. Michigan Inc., 192 F.3d 1353, 1360 (Fed. Cir. 1999), citing In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994).

A method according to any of claims 19, 21-23, and 29 includes, *inter alia*, "disposing a belt structure on an auxiliary drum; . . . applying a tread band onto the belt structure; . . . wherein applying the tread band is carried out by winding up at least one continuous strip element of elastomer material in contiguous circumferential coils around the belt structure; . . . wherein during disposing the belt structure on the auxiliary

drum, the auxiliary drum is arranged in a coaxial-alignment relationship with the primary drum; . . . wherein after disposing the belt structure and before winding up said at least one continuous strip element of elastomer material, a step is carried out of moving the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards a delivery member that feeds the strip element forming the tread band around the belt structure with the auxiliary drum positioned away from the vertical plane containing the rotation axis of the primary drum" (emphasis added). Each of claims 30, 31, and 33 includes similar features.

Applicant respectfully submits that Sasaki and JP '737 teach away from at least these features of Applicant's claimed invention. Sasaki and JP '737 both disclose inventions focused on reducing the time required to manufacture a given tire. See Sasaki at col. 1, ll. 52-60, col. 2, ll. 53-63, and col. 5, ll. 6-8; and JP '737 at English Abstract. Specifically, each reference discloses a system directed toward reducing tire-production time in prior systems that construct a "belt cover layer" or a "cap layer" (not the tread band) by spirally winding cords. See Sasaki at col. 1, ll. 47-51; and JP '737 at English Abstract.

Sasaki bemoans that constructing a portion of a tire, such as the "belt cover layer," by spirally winding cords "requir[es] a very long time," undesirably increasing the time required to construct the tire. Col. 1, ll. 56-60. The references deal with this problem by constructing the belt and tread of each tire at a first position and winding the "belt cover layer" or "cap layer" at a second position. Sasaki at col. 1, ll. 52-60, col. 2, ll. 53-63, col. 3, l. 40-col. 4, l. 58, and col. 5, ll. 6-8; and JP '737 at English Abstract. By constructing both the belt and tread at one position during the protracted winding of the

“belt cover layer” or “cap layer” occurs at a different position, Sasaki and JP '737 disclose that the system regains some of the efficiency lost by employing spiral winding to construct the “belt cover layer” or “cap layer.” Sasaki at col. 2, ll. 53-63, col. 4, ll. 44-58, and col. 5, ll. 6-8; and JP '737 at English Abstract.

Applicant respectfully submits that these disclosures would discourage a person of ordinary skill in the art from implementing Applicant's claimed invention. With their emphasis on constructing the belt and the tread at the same position to regain some efficiency in the manufacturing process, Sasaki and JP '737 would discourage a person of ordinary skill in the art from configuring a system “wherein during disposing the belt structure on the auxiliary drum, the auxiliary drum is arranged in a coaxial-alignment relationship with the primary drum” and “a delivery member [] feeds the strip element forming the tread band around the belt structure with the auxiliary drum positioned away from the vertical plane containing the rotation axis of the primary drum.” Indeed, the disclosure that constructing a tire component by spirally winding coils undesirably increases the time required to construct the tire would discourage a person of ordinary skill in the art from implementing any system wherein “applying the tread band is carried out by winding up at least one continuous strip element of elastomer material in contiguous circumferential coils.” Sasaki and JP '737 would likewise discourage a person of ordinary skill in the art from implementing the similar features of claims 30, 31, and 33.

For at least the reason that Sasaki and JP '737 teach away from Applicant's invention of claims 19, 21-23, 29-31 and 33, Applicant respectfully submits that the Office Action does not establish a *prima facie* case of obviousness of these claims.

Accordingly, Applicant respectfully requests withdrawal of the rejections of these claims under 35 U.S.C. § 103(a).

Rejection of Claims 24, 25, and 34 Under 35 U.S.C. § 103(a)

Regarding the rejection of claims 24, 25, and 34 under 35 U.S.C. § 103(a) as being unpatentable over various combinations of references that include Caretta, Applicant respectfully submits that the Office Action does not establish a *prima facie* case of obviousness. In addition to the above-discussed deficiencies of the rejections of independent claims 19 and 30, Applicant respectfully submits that Caretta teaches away from the Applicant's claimed invention. Applicant's Reply of June 23, 2009 explains this additional deficiency of the prior art pages 20 and 21, yet the Office Action fails to even discuss this matter. See Office Action at 8. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 24, 25, and 34 under 35 U.S.C. § 103(a).

New Claims 56 and 57

Applicant respectfully submits that new claims 56 and 57 are novel and non-obvious over the cited prior art for at least the above-discussed reasons that claims 19, 21-25, 29, 30, 31, 33, and 34 are novel and non-obvious over the cited prior art. Accordingly, Applicant respectfully requests examination and allowance of new claims 56 and 57.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims.

The Office Action contains characterizations of the claims and the related art with which Applicant does not necessarily agree. Unless expressly noted otherwise, Applicant declines to subscribe to any statement or characterization in the Office Action.

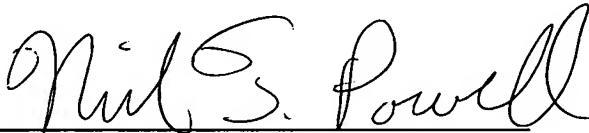
Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account no. 06-0916.

If the Examiner believes a telephone conversation might advance prosecution, the Examiner is invited to call Applicants' undersigned agent at 202-408-4492.

Respectfully submitted,

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Dated: February 26, 2010

By: 
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